

ProAsia Semiconductor Corporation

1200V/60A Silicon Carbide Schottky Diode

Preliminary

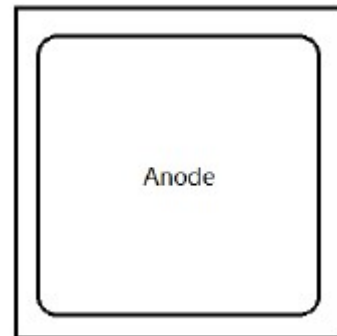
Features

- Zero or negligible reverse recovery
- Low forward voltage
- Positive temperature coefficient
- Extended surge current capability
- High junction temperature
- Temperature invariant switching behavior

V_{RRM}	1200V
I_F	60A
Q_c	300nC

Applications

- Solar inverters
- Motor drivers
- Power Factor Correction
- SMPS



Electrical Specifications

$T_C=25^{\circ}\text{C}$, unless otherwise specified.

Symbol	Parameter	Test Condition	Min	Typ	Max	Unit
V_R	Reverse Blocking Voltage	$I_R=250\mu\text{A}$	1200			V
I_R	Reverse Current	$V_R=1200\text{V}$ $T_J=25^{\circ}\text{C}$ $T_J=150^{\circ}\text{C}$		50 160	100 600	μA
V_F	Forward Voltage	$I_F=60\text{A}$ $T_J=25^{\circ}\text{C}$ $T_J=150^{\circ}\text{C}$		1.5 2.1	1.7 2.5	V

Absolute Maximum Ratings

$T_C=25^{\circ}\text{C}$, unless otherwise specified.

Symbol	Parameter	Rating
V_{RRM}	Repetitive Peak Reverse Voltage	1200V
I_F	Continuous Forward Current	60A
I_{FSM}	Non-Repetitive Forward Surge Current, $t_p=10\text{ms}$	400A
I_{FRM}	Repetitive Forward Surge Current, $t_p=10\text{ms}$	300A

These are stress ratings only and functional operation is not implied. Exposure to absolute maximum ratings for prolonged time periods may affect device reliability.

Mechanical Parameters

Parameter	Typical Value	Unit
Wafer Size	150	mm
Die Thickness	175	um
Top Metallization (Al)	4.2	μm
Back Metallization (Ti/Ni/Ag)	1.4	μm
Frontside Passivation	Polyimide	
Cut line	100	um